



PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Shulman et al.

Art Unit: 2124

Application No.: 09/970,409

Examiner: Tuan Quang Dam

Filed: October 3, 2001

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For: COMPUTER PROGRAMMING
LANGUAGE STATEMENT BUILDING
AND INFORMATION TOOL

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**PENDING CLAIMS AFTER AMENDMENTS
RECITED IN RESPONSE TO OFFICE ACTION DATED MARCH 29, 2002**

21. A computer-readable medium containing computer-executable instructions to perform a method for assisting a computer programmer in real-time to modify a present programming language statement of a computer program, the method comprising:

5 enabling a programming language editor having a character position cursor and a randomly positionable pointer;

partially compiling available ones of a plurality of programming language statements in said computer program;

10 defining a finite set of programming language statement information that is relevant to at least one segment of the present programming language statement from among said plurality of programming language statements that is proximate to said character position ^{cursor} which allows modification of the programming language statement; and

15 automatically generating a passive assist window that contains said finite set of programming language statement information in a location proximate to said character position cursor that does not obstruct the current view of said programming language statement.

and at least one of selection menu information

22. The computer-readable medium of claim 21, having further computer-executable instructions for performing:

- modifying the present programming language statement based at least in part on the selected programming language statement information; and
- automatically removing the passive assist window when the programming language statement has been amended.

23. A computer-readable medium whose contents cause a computer system to supplement a computer programming statement by performing the steps of:

- automatically displaying the computer programming statement; and
- proximate to the display of an incomplete computer programming statement, automatically displaying a dynamic list of one or more textual programmatic entities.

24. The computer-readable medium of claim 23, having further computer-executable instructions for performing:

- receiving a user input selection of one of the displayed textual programmatic entities; and
- adding the selected textual programmatic entity to the displayed statement.

25. (New) A method for assisting a computer programmer in modifying a programming language statement, the method comprising:

- enabling a positionable cursor within a programming language editing tool;
- automatically generating a passive assist window in response to the location of the positionable cursor, the passive assist window containing programming language statement information including at least one of selection menu information and information related to the programming language statement.

26. (New) The method of claim 25 wherein the passive assist window generates and disappears independent of user intervention.

27. (New) The method of claim 25 wherein the passive assist window permits a user typing the programming language statement to type through the programming language statement information, the passive assist window automatically altering the programming language statement information in response to the typing.

28. (New) The method of claim 25 wherein the passive assist window further provides one or more entries for completing the programming language statement via automatic anticipation typing.

29. (New) The method of claim 28 wherein the one or more entries are user-defined entries.

30. (New) The method of claim 29 wherein the user-defined entries enable a plurality of users to modify related programming language statements independent of prior sharing of information related to the user-defined entries.

31. (New) The method of claim 25 wherein the passive assist window is a pop-up window that disappears if ignored by a user.

32. (New) A computer readable medium containing computer executable instructions to perform a method for assisting a computer programmer in modifying a programming language statement, the method comprising:

enabling a positionable cursor within a programming language editing tool; and
automatically generating a passive assist window in response to a location of the positionable cursor, the passive assist window containing programming language statement information including at least one of selection menu information and information related to the programming language statement.

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33. (New) The method of claim 32 wherein the passive assist window generates and disappears independent of user intervention.

34. (New) The method of claim 32 wherein the passive assist window permits a user typing the programming language statement to type through the programming language statement information, the passive assist window automatically altering the programming language statement information in response to the typing.